

CLAIMS

1. A fuel dispenser system comprising:

a fuel dispensing cabinet configured for dispensing fuel, and including

a fuel dispensing hose,

a fuel flow system in said cabinet and connected to a source of said fuel for controllably dispensing said fuel via said dispensing hose,

a fuel flow control system further comprising:

a computer display,

a computer operatively coupled to said display,

electrical pump control circuitry operatively coupled to said computer,

power supply circuitry configured to provide power potentials to all components requiring said power potentials and,

a removable module in said fuel dispenser cabinet, with said computer display being in usable relation for a customer, and said computer, said electrical pump control circuitry, and said power supply circuitry mounted in said module, said module electrically coupled to said fuel flow system when inserted into place and electrically disconnected from said fuel flow system when removed.

2. A fuel dispenser system as set forth in claim 1 further comprising slide apparatus upon which said module is slidably mounted to said fuel dispenser.

1 3. A fuel dispenser system as set forth in claim 2 further comprising at least
2 one first electrical connector on said module and coupled at least to said fuel
3 flow control system and at least a second electrical connector mounted in said
4 fuel dispenser and coupled at least to said fuel flow system, said first electrical
5 connector and said second electrical connector being in aligned, mating
6 relation when said module is installed in said fuel dispenser.

1 4. A fuel dispenser system as set forth in claim 3 wherein said first electrical
2 connector is on a rear of said module and said second electrical connector is in
3 a recess within which said module is slidably mounted.

1 5. A fuel dispenser system as set forth in claim 4 further comprising:
2 a plurality of said fuel dispensers at a fuel dispensing station,
3 a card reader and receipt producing device in operable relation to a
4 customer in each removable module of said plurality of said fuel dispensers,
5 a communications network coupling each said computer in each said
6 fuel dispenser together and to a site controller via each respective said first
7 connector and an associated said second connector of said plurality fuel
8 dispensers.

1 6. A fuel dispenser as set forth in claim 5 wherein said site controller is located
2 in a said computer of a respective one of said fuel dispensers so that said
3 plurality of fuel dispensers are controlled by said site controller and are

4 autonomously operable without need of an attendant.

1 7. A fuel dispenser as set forth in claim 5 wherein configuration information
2 for said plurality of fuel dispensers is stored in one said computer of a
3 respective said fuel dispenser, and transmitted over said communications
4 network to a said computer in a said fuel dispenser requiring said
5 configuration information.

1 8. A fuel dispenser as set forth in claim 7 wherein said configuration
2 information is stored in a removable flash memory storage device.

1 9. A fuel dispenser as set forth in claim 7 wherein said configuration
2 information is stored in a permanently installed flash memory device.

1 10. A fuel dispenser system comprising:

2 a fuel dispensing cabinet configured for dispensing fuel, and including
3 a fuel dispensing hose,

4 a fuel flow system in said cabinet and connected to a source of said
5 fuel for controllably dispensing said fuel via said dispensing hose,

6 a fuel flow control system further comprising:

7 a computer display,

8 a computer operatively coupled to said display,

9 electrical pump control circuitry operatively coupled to said

10 computer,
11 a card reader operatively coupled to said computer,
12 power supply circuitry configured to provide power potentials
13 to all components requiring said power potentials and,
14 a module having one side configured for use by a customer,
15 with said computer display and said card reader being in usable relation with
16 said one side, and said computer, said electrical pump control circuitry, said
17 card reader and said power supply circuitry mounted in said module,
18 a recess in said fuel dispenser for slidably receiving said
19 module,
20 at least one first electrical connector mounted to a rear side of
21 said module, said first electrical connector containing a plurality of first
22 electrical terminals,
23 at least one second electrical connector mounted in said
24 recess in aligned relation with said first electrical connector, said second
25 electrical connector containing a plurality of second electrical terminals
26 configured for mating relation with said plurality of first electrical connectors,
27 whereby said module is electrically coupled to said fuel flow
28 system when installed in said recess.

1 11. A fuel dispenser system as set forth in claim 10 further comprising a
2 plurality of said fuel dispensers in a single location, with a communications
3 network coupling said plurality of said fuel dispensers via selected ones of said

4 first electrical terminals and corresponding ones of said second electrical
5 terminals to a site controller configured for coupling sales transactions from
6 said plurality of said fuel dispensers to the Internet for completing said sales
7 transactions.

1 12. A fuel dispenser system as set forth in claim 11 further comprising
2 locating said site controller in a one of said fuel dispensers for autonomous
3 operation of said plurality of fuel dispensers.

1 13. A fuel dispenser system as set forth in claim 12 further comprising a non-
2 volatile memory storage device coupled to a said computer in a respective said
3 fuel dispenser and containing at least configuration data for said module.

1 14. A fuel dispenser system as set forth in claim 13 wherein said non-volatile
2 memory storage device is a removable nonvolatile flash memory storage device.

1 15. A fuel dispenser system as set forth in claim 13 wherein said non-volatile
2 memory storage device is permanently mounted to said computer.

1 16. A fuel dispenser system as set forth in claim 13 wherein said non-volatile
2 memory storage device also contains a site controller.

1 17. A fuel dispensing system including a plurality of fuel dispensers

2 comprising:

3 a fuel dispensing cabinet configured for dispensing fuel, and including

4 a fuel dispensing hose,

5 a fuel flow system in said cabinet and connected to a source of said

6 fuel for controllably dispensing said fuel via said dispensing hose,

7 a fuel flow control system further comprising:

8 a computer display,

9 a computer operatively coupled to said display,

10 electrical pump control circuitry operatively coupled to said

11 computer,

12 power supply circuitry configured to provide power potentials

13 to all components requiring said power potentials,

14 said computer, said electrical pump control circuitry and said

15 power supply circuitry mounted in stacked relation behind and to said display,

16 a card reader operatively coupled to said computer,

17 a receipt-producing device operatively coupled to said

18 computer,

19 a module having a front side configured as a front of said

20 cabinet, with said computer display, said card reader and said receipt-

21 producing device being in customer-usable relation with said front side, said

22 computer, said electrical pump control circuitry, said power supply circuitry,

23 said computer display, said card reader and said receipt-producing device

24 being in ^{Said} ~~said~~ module and electrically coupled to said cabinet when said module

25 is inserted into place and electrically disconnected from said cabinet when said
26 module is removed,

27 a non-volatile memory coupled to said computer, with
28 configuration data for an associated said fuel dispenser in said non-volatile
29 memory being available so that said configuration data may be removed from a
30 defective said computer and re-installed into a replacement computer.

1 18. A fuel dispensing system as set forth in claim 17 further comprising site
2 controller software in said non-volatile memory.

1 19. A fuel dispensing system as set forth in claim 18 wherein said non-volatile
2 memory is a removable flash memory card.

1 20. A fuel dispensing system as set forth in claim 18 wherein said non-volatile
2 memory is permanently installed.